

Abstract of the Disclosure

An encryption apparatus using a DES encryption algorithm is disclosed. The apparatus for encrypting 64-bit plain text blocks includes: input buffering unit for receiving a plain text block byte-by-byte and outputting a first and a second 32-bit plain text blocks in response to a first clock; encryption unit for performing time multiplexed encryption of the first and the second 32-bit plain text blocks in response to the first clock and a second clock, thereby generating a first and a second 32-bit cipher text blocks; and output buffering unit for receiving the first and the second 32-bit cipher text blocks in response to the second clock and outputting eight 8-bit cipher text blocks.